

Amendments to the Claims

The listing of claims presented below replaces all prior versions, and listings, of claims in the application.

Listing of claims:

1. (currently amended) A dental handpiece, comprising:
 - a head having a turbine with dental instrument mounting means, said head having at least one gas feeding aperture to supply gas to the turbine;
 - a handpiece body having a head mounting seat and a gas feeding channel, said head being mounted to said head mounting seat turnably mounting the head which provides complete rotation of said head around an axis of rotation of the head relative to said head mounting seat;
 - at least one intermediate gas feeding channel provided encircling around the axis of rotation of the head relative to said head mounting seat on at least one of an inner surface of the head mounting seat and an outer surface of a part of the head positioned inside the seat, wherein said at least one intermediate gas feeding channel connecting the gas feeding channel to said at least one gas feeding aperture at any position of the head being fully turned.
2. (original) The dental handpiece according to claim 1, wherein the gas feeding aperture is made in a form of a nozzle.
3. (original) The dental handpiece according to claim 1, further comprising at least one outlet aperture provided in the head; and at least one gas discharge channel provided in the head mounting seat and in the handpiece body to discharge the gas from said at least one outlet aperture at any position of the head being turned.
4. (currently amended) The dental handpiece according to claim 3, further comprising at least one intermediate gas discharge channel provided encircling around an axis of rotation of the head relative to said head mounting seat on the outer surface of the part of the head positioned inside the seat, said intermediate gas discharge channel connecting said at least one outlet aperture to the gas discharge channel in the body at any position of the head being fully turned.
5. (currently amended) The dental handpiece according to claim 1, further comprising means for securing the head in the seat, said means providing fast detachment and mounting or replacement of the head, said means being located in

said at least intermediate gas feeding channel and also being connected to the handpiece body.

6. (original) The dental handpiece according to claim 1, wherein an outer surface of the handpiece body around the head mounting seat and an outer surface of the head form together a shape of a body of rotation.

7. (original) The dental handpiece according to claim 1, wherein the dental instrument mounting means comprises a device for fixation and release of an instrument therein from a working field side.

8. (currently amended) The dental handpiece according to ~~claim 1~~ claim 4, wherein at least one of said at least one intermediate gas feeding channel and intermediate gas discharge channel, connecting the gas feeding channel to said at least one aperture, is provided on an end face part of the head.

9. (currently amended) The dental handpiece according to claim 1, further comprising a device for discrete fixation of the head being turned, wherein a force of fixation is selected to be not greater than a force of resistance capable of stopping the turbine operating under an action of gas fed to the turbine.

10. (original) The dental handpiece according to claim 1, further comprising a mechanical drive for turning the head.

11. (original) The dental handpiece according to claim 10, wherein the mechanical drive is a gear pair with one gear positioned on the head and another gear positioned inside the body of the handpiece.

12. (original) The dental handpiece according to claim 10, further comprising a reducer connecting the mechanical drive to a drive.

13. (original) The dental handpiece according to claim 1, further comprising a light guide mounted in the body of the handpiece.

14. (original) The dental handpiece according to claim 1, further comprising
a first light guide positioned in the body of the handpiece and having an outlet in the head mounting seat; and

at least one second autonomous light guide positioned in the head, whereby light from the outlet of the first light guide is transmitted to an inlet of the at least one second light guide at any position of the head being turned.

15. (currently amended) The dental handpiece according to claim 14, wherein the outlet of the first light guide and the inlet of the second light guide are positioned on ~~[[an]]~~ the axis of rotation of the head relative to the head mounting seat.

16. (currently amended) The dental handpiece according to claim 1, wherein the inner surface of the head mounting seat and the outer surface of the part of the head positioned inside the seat are made congruent and grounded-in in such a manner that fixation of the head in a predetermined position is provided, wherein a force of fixation is selected to be not greater than a force of resistance capable of stopping the turbine operating under an action of gas fed to the turbine.

17. (currently amended) A dental handpiece, comprising:

a head with a dental instrument mounted thereon;

a handpiece body with a head mounting seat, the head mounting seat being adapted to ~~turnably mount to~~ the head and provide complete rotation of said head around an axis of rotation of the head relative to said head mounting seat;

at least one first light guide positioned in the body of the handpiece, said at least one first light guide having an outlet in the head mounting seat; and

at least one second light guide positioned in the head, said at least one second light guide having an inlet in a part of the head positioned inside the seat and an outlet on another part of the head,

wherein the outlet of said at least one first light guide and the inlet of said at least one second light guide are positioned at least partially opposite each other in any position of the head being turned.

18. (original) The dental handpiece according to claim 17, wherein the outlet of the first light guide and the inlet of the second light guide are positioned on an axis of rotation of the head relative to the head mounting seat.

19. (original) The dental handpiece according to claim 17, wherein the head further comprises at least one gas discharge aperture for blowing the outlet of at least one second light guide thereby cleaning it.

20. (currently amended) A dental handpiece, comprising:

a head having a turbine with dental instrument mounting means, said head having at least one gas feeding aperture to supply gas to the turbine;

a handpiece body having a head mounting seat and a gas feeding channel, said head being mounted to said head mounting seat ~~turnably mounting the head~~

which provides complete rotation of said head around an axis of rotation of the head relative to said head mounting seat;

at least one intermediate gas feeding channel provided on at least one of an inner surface of the head mounting seating and an outer surface of a part of the head positioned inside the seat, wherein said at least one intermediate gas feeding channel connects the gas feeding channel to said at least one gas feeding aperture at any position of the head being fully turned;

a micromotor having an inlet for feeding gas and an outlet for providing mechanical drive action, wherein the outlet for providing mechanical drive action is connected to the head, and the inlet for feeding gas to the micromotor is connected to the gas feeding channel in the body.

21. (original) The dental handpiece according to claim 20, wherein the micromotor is connected to the head by means of a gear or a friction drive.

22. (currently amended) The dental handpiece according to claim 20, wherein the inlet for feeding gas to the micromotor is connected to the gas feeding channel in such a manner that when the micromotor is activated for generating mechanical drive action, gas is supplied to the micromotor only, and when the micromotor is deactivated the gas is supplied only through the gas feeding channel and the intermediate gas feeding channel to the turbine.

23. (original) The dental handpiece according to claim 20, wherein the micromotor provides generation of direct and reverse mechanical drive action.

24. (original) The dental handpiece according to claim 20, wherein the micromotor is an electric micromotor in which the inlet for feeding gas provides cooling gas to the micromotor, wherein when the micromotor is activated to produce mechanical drive action, the cooling gas is supplied only to the micromotor, while when the micromotor is deactivated the cooling gas is supplied only through the gas feeding channel to the turbine.

25. (original) The dental handpiece according to claim 20, wherein the micromotor is adapted for operation with either a mechanical or a turbine handpiece and is made rapidly-detachable for both types of handpieces.

26. (new) The dental handpiece according to Claim 4, further comprising means for securing the head in the seat, said means providing fast detachment and mounting or replacement of the head, said means being located in at least one of the

intermediate gas discharge channel and being also connected to the handpiece body.

27. (new) The dental handpiece according to Claim 1, wherein a shape of the encircling intermediate gas feeding channel is selected from the group including an at least partial ring, an at least partially flat spiral, and at least partially spatial spiral and any combination thereof.

28. (new) The dental handpiece according to Claim 4, wherein a shape of the encircling intermediate gas discharge channel is selected from the group including an at least partial ring, an at least partially flat spiral, at least partially spatial spiral and any combination thereof.